**Market Structure**

**1. What is a perfect market structure?**

In the perfect market structure, there is perfect market information and mobility of factors of production. There are many firms and the product is homogeneous. The firms are also price-takers as no firms can control the production level and thus cannot set the price level.

**2. What is an imperfect market structure?**

In the imperfect market structure, there is imperfect market information and immobility of factors of production. The number of firms ranges from few to many and the product can be heterogeneous or homogeneous. There is slight to great market control as firms can create their own market share.

**3. What is Perfect Competition Market Structure?**

With perfect competition, there is perfect market information and mobility of factors of production. There are many buyers and sellers who can have information about the price and output level transacted.

**4. What is a Monopoly?**

 In the monopoly form of market structure, there is imperfect market information and mobility of factors of production. There is only one firm and the product is homogeneous. The firm has strong market control as it can impose strong barriers to entry, either naturally or artificially. The firm in this industry is price-setter whereby the firm can set the price or the quantity level.

**5. What is a natural monopoly?**

 A natural [monopoly](http://en.wikipedia.org/wiki/Monopoly) is a condition of an industry whereby it is most efficient (involving the lowest long-run average cost) for production to be concentrated in a single firm. Capital intensive industries, like the utilities industries, have huge overhead costs and hence set the condition for natural monopoly to exist, preventing expensive duplication of services.

**6. What is an Oligopoly?**

In the oligopolistic form of market structure, there is imperfect market information and mobility of factors of production. There are a few firms and the product is differentiated. The firms have strong market power as they can create barriers-to-entry but the firms are mutually interdependent. The firm in this industry is price-setter whereby the firm can set the price or the quantity level.

**7. What is a Monopolistic Competitive Market?**

 In the monopolistic competitive market structure, there is imperfect market information and mobility of factors of production. There are many firms and the product is highly differentiated. The firm also possesses slight market power as it can create its own market share through product differentiation but the control of the market is limited. The firm in this industry is price-setter whereby the firm can set the price or the quantity level but has a high degree of substitution, contributing to the presence of a price-elastic demand curve.

**8. What is perfect market information?**

 Every seller knows the prices his rivals charge, the market costs, its cost of production and the available production technology. Buyers also have complete information about each and every seller’s price, the higher quality and availability of the products. Thus, they will not purchase at a higher price than the prevailing market equilibrium price.

**9. What is market concentration ratio?**

 Market concentration ratio is the reflection of market share a company has as compared to its rivals in the same industry.

**10. Characteristics of the different types of market structure**

**10.1 What are the characteristics of a perfect competitive firm?**

-large number of buyers and sellers

-homogenous product

-perfect knowledge

-no barriers to entry

**10.2. What are the characteristics of a monopoly?**

-single producer

-no close substitutes for the product

-imperfect knowledge of product

-high barriers to entry

**10.3. What are the characteristics of an oligopolistic firm?**

-small numbers of large firms relative to market size

-products can be homogeneous or differentiated

-imperfect knowledge

-existence of substantial barriers to entry

**10.4. What are the characteristics of a monopolistic competitive firm?**

-large numbers of buyers and sellers

-differentiated products

-no/low barriers to entry

-imperfect knowledge

**11. What is price discrimination?**

-Price discrimination: the practice of charging different prices to different groups of customers for the exact same product or for different quantities of a specific product at two or more prices or rest merely on different buyers’ valuation of the same product, they are discriminatory for reasons not associated with cost differences.

**What is 1st degree price discrimination?**

This happens when a firm charges each consumer the highest price he would pay for the good. The firm is able to capture all of consumer surplus. Eg auctions

**What is 2nd degree price discrimination?**

The firm charges different prices for different blocks of the same good according to how much the customer purchases. Eg electricity and water

**What is 3rd degree price discrimination?**

 The firm sells the same product at different prices to different consumers.

**11.1 What are the negative impacts of price discrimination?**

-It may be a form of consumer exploitation. ( Some consumers will pay at a higher price and there is allocative inefficiency)

-It may also increase the cost of product

(cost in engaging in the change of product imagery – inform the consumers about the change)

**11.2 What are the positive impacts of price discrimination?**

-Price discrimination makes it possible to supply a good which otherwise could not have been produced. For example, the services of a surgeon. (allow the surgeon to charge high price to sustain the provision of services – ensure that the loss from the lower price market is covered by the high price market)

-Price discrimination makes it possible for a greater number of consumers to benefit from the product/services.

-May be used to cultivate customer loyalty. (encourage greater consumption)

-Can allow the firm to produce above a larger quantity so as to reap EOS.

(lower AC – raise profitability)

**11.3 Is price discrimination feasible in the pharmaceutical industry?**

 The source of answer:

-Two or more prices being charged

-The good in all situation must be exactly the same good

-Price differences must not arise out of cost differences

-The seller must be able to control the supply of the good and thus prevent the resale of the good from one market to another

-Ability of the monopolist to separate markets:

i. geographically

ii. by type of demand

iii. by time

iv. by nature of product

**12. Explain how firms set price and output in the imperfect market structure and assess the factors that cause the extent of change in price and output level.**

**Essay Question**

**Explain how, in economic theory, firms in imperfect markets would determine the price that would maximize profits. [10]**

Introduction (**requirements of the question / economic principles**

Imperfect market structures are market structures that have imperfect market information (price and cost of production) and immobility of factors of production (occupational and geographical). The firms under these forms of market structures possess certain degree of market power which will affect the production equilibrium that will determine the price level set by the firm. Regardless of the types of market structures, the firm will base on the notion of profit maximization to determine production equilibrium when the firms aim to maximize profit.

Main Body

**1. Explain the various types of market structures**

Under the imperfect market structures, it can be classified as monopolistic, oligopolistic or monopolistic competitive market where the industry may have one firm, few firms or many firms. For the monopoly, the produce of the firm is unique and there is high degree of market power while the product of the firm in the oligopoly is classified as homogeneous or differentiated and has strong market powers. However, the product of the firms in the monopolistic competitive market is classified as differentiated and there is small degree of market power.

**2. Explain how the firms in the imperfect market is affected by the market power of the firms**

Due to the influence of the market power, the firms in the imperfect market structure will have a downward-sloping MR and AR, indicating that the firm is capable of practicing price-setting whereby the firm can either decrease price to increase quantity demanded or increase price but face a lower level of quantity demanded. For the monopoly and oligopoly, the market power is derived from the barriers to entry while the market power for the monopolistic competition is based on product differentiation.

**3. Explain how the price level is determined by the production equilibrium based on profit maximization**

Based on this downward-sloping MR and AR, the firms in the imperfect market can set the price level when the production equilibrium is attained; abiding to the profit-maximising rule, Under this rule, the firm will increase production when the MR is greater than the MC since additional net profit can be earned and decrease production level when the MR is less than MC since additional net loss may be incurred. Thus, it will attain production equilibrium at the level of output where MR is equal to MC

**MR > MC – presence of additional net profit – increase production**

**MR < MC – presence of additional net loss – decrease production**

**MR = MC – production equilibrium**

AR=DD=P

Q0

Qty

MR

MC

Price

PC

P0

As seen from the diagram, it can be observed that the MR and AR are downward-sloping while the MC is upward-sloping as there is a higher rate of utilization of resource capacity. The production equilibrium is set at the quantity level of Q0 while the price level is set at P0 where MR = MC, abiding the rule of profit maximization when the firm determines price and output level.

**Different profit levels (optional)**

The firms in the imperfect market structures will make different levels of profit in the short-run and long run when it attains production equilibrium. In the short run, it can make subnormal profit, normal profit or supernormal profit. But in the long run, the firm can make only normal or supernormal profit as the firm will have to shut down when it incurs subnormal profit.

**Production and allocative efficiency**

It is imperative to note that the firm in the imperfect market structure will not be able to attain allocative efficiency as the price level is set at profit-maximising level does not equal to the marginal cost. It is not able to attain production efficiency in the short-run as the firm is producing at the excess capacity at the profit-maximising level of output though they are able to achieve production efficiency in the long run from the profit-maximizing level of production.

Conclusion

In sum, the profit-maximising rule will influence how the firm determines its price strategy in the imperfect market structure. The downward-sloping AR and MR condition will mean that the firms may not satisfy other aims of the firms when it set price level based on profit-maximising rule.

Until the price and output is set – what would you want to discuss further

Qn: Why the price is higher at the rural area and why it is lower at the urban city?

Variation of price-elasticity of MR and AR 🡪 degree of substitution 🡪 affected by number of firms 🡪 the price is higher when the MR and AR is price-inelastic and the price is lower when the MR and AR is price-inelastic

**13. Forms of Efficiency**

Allocative efficiency is a type of economic efficiency in which economy/producers produce only those types of goods and services that are more desirable in the society and in high demand. Allocative efficiency is a point where marginal benefit is equal to marginal cost (P=MB=MC). When this is attained, the industry attains optimization of allocation of resources as there is no dead weight loss. Thus, both consumers and producers attain maximization of consumer and producer surplus

Productive efficiency occurs when the economy is utilizing all its resources efficiently. The concept is illustrated on a production possibility curve where all points on the curve are points of maximum productive efficiency. When this is attained at the respective level of output, the firm produces at the lowest average cost of production, enabling it to sell at the lowest price level. In doing this, the consumers and producers can gain greater maximization of welfare with higher consumer and producer surplus.

Reaping Economies of scale is also beneficial as firms can lower average cost of production by spreading the total cost over a larger number of outputs. As such, the firm can lower price level of the good. Consequently, the consumers and producers can lower their price and output level to raise welfare for the consumers and producers.

X-inefficiency is the difference between efficient behavior of businesses assumed or implied by economic theory and their observed behavior in practice caused by a lack of competitive pressure. This usually occur when there is only firm in the industry and the firm acts like a monopoly. In this situation, the firm has little incentive to control costs, causing the average cost of production to be higher than necessary.

**14. Explain how the impact on the society, the producers and the consumers when the firm in the imperfect market focuses on profit maximization in setting price and output.**

Introduction

When the firm focuses on profit maximization, it sets the production at the level where marginal revue is equal to marginal cost. At this level of output, the firm maximizes the profit level to the maximum on a marginal basis and the firm is capable to attain the maximum profit level. However, there are some negative impacts which undermines the society, the consumers and the producers.

Main Body

1. Explain how the firm set price and output level is set based on profit maximization and how this determine profit level.

2. Explain how this price and output level based on profit maximizing rule affects the producers

3. Explain how this price and output level based on profit maximizing rule affects the consumers and society.

4. Analysis: key determinants in this impact

Conclusion

**15. Why firms in the imperfect market structures are unable to attain allocative efficiency in the short run?**

The firms in the imperfect market structure will not be able to attain allocative efficiency as the firms focuses on profit maximization in which production level is at where the marginal cost is equal to the marginal revenue. This is below the social efficiency level of production, in which the production level is at where price is equal to marginal cost. This is so as the downward sloping demand curve due to the market power of the firms will contribute to the difference of the production level in the SR. Consequently, the firms experience welfare loss as there is a loss of consumer and producer surplus.

**15.1 Why firms in the imperfect market structures are unable to attain production efficiency in the short run?**

The firms in the imperfect market structure produces at the profit maximizing level of output and this level of output is unlikely to produce at the optimal capacity of production where the average cost of production is lowest as the firms are usually producing at the excess capacity of production at this level of output.

**16. Should the government regulate the monopoly?**

**17 How should the government regulate the monopoly?**

-MC pricing

-Two tier charge

-taxes

-licensing and quotas

**Anti-trust law**

Competition law, known in the United States as antitrust law, is [law](http://en.wikipedia.org/wiki/Law) that promotes or maintains [market competition](http://en.wikipedia.org/wiki/Market_competition) by regulating [anti-competitive](http://en.wikipedia.org/wiki/Anti-competitive) conduct by companies.

**Free Competition Act**

Free Competition Act is a [law](http://en.wikipedia.org/wiki/Law) that promotes or maintains [market competition](http://en.wikipedia.org/wiki/Market_competition) by regulating [anti-competitive](http://en.wikipedia.org/wiki/Anti-competitive) conduct by companies in Singapore.

**18. Explain how economies of scale determine the market structure in which a firm operates in the real world. [10]**

1) definition and characteristics of economies of scale

2) explain how these features of economies of scale will determine the type of market structure

- economies of scale affect the size of the firm

- economies of scale affect the barrier to entry

- decrease average cost – lower the price of goods – predatory pricing / block the market competition

- increase their market share – higher market concentration ratio and thus the market is now oligopoly or can be monopoly if the market share is 100%

Introduction

* Definition of ‘economies of scale’ (EOS)
* State that EOS will affect the form of market structure as it is a source of barriers to entry to influence the structure of the industry

Main Body

**1. Explain how EOS would affect the average cost**

* Explain the type of EOS that will occur in both internal and external EOS
* Internal and External EOS (Diagrams) / set the graph with lower LRAC - can lower price and increase output – increase production

**2. Explain how EOS becomes a source of barriers to entry (BTE) that will shape the market structure / market concentration ratio**

1. EOS🡪↓ average cost 🡪 firms lower price – prevent competition 🡪only for large firms 🡪∴ the industry will become oligopoly or monopoly

**(increase their market share – raise the market concentration ratio - > 50% of market concentration ratio by the top 10 firms – oligopoly)**

* EOS attained at very large output 🡪 a form of natural monopoly
* Small firms are unable to reap EOS exclusively 🡪 no BTE for monopolistic competitive market
1. EOS attained through managerial expertise and technical advantage 🡪 strong BTEs to block competition
2. Diversification of market achieved through EOS 🡪 leads to price discrimination 🡪 only possible for oligopoly and monopoly
3. External EOS🡪 help bigger firms to grow 🡪 some will develop more market power 🡪 formation of oligopoly market

Conclusion

**19. Explain how the expiration of the intellectual property rights affect the price and output level of the firms.**

Introduction

Meaning of the expiration of intellectual property rights or patent rights

Patent rights are a form of barrier to entry. Hence this prevents new firms from entering the market. The few firms in the industry share the market, resulting in high market power.

Concept of profit maximization

State that the expiration of intellectual property rights affects the concept of profit maximization

Main Body

1. Explain how the price and output is set by firms in the imperfect market

2. Explain the expiration of the intellectual property rights

3. Diagram and description

4. Analysis – key factors for consideration

Conclusion

**Explain how the firms in the non-collusive oligopolistic market determine price and output decision.**

This model explains why once a price-output combination has been decided upon and the oligopolistic firms will not want to experiment with further price changes.

When the firm increases price, the rival firm will not increase price as the rival firm can gain as the customers will switch the consumption from the firm to the rival firm. This will lead to a large reduction in quantity demanded since the degree of substitution is large, contributing to the demand curve for this portion to be price-elastic. However, when the firm decreases the price, the rival firms will follow suit as they will lose out if the customers of the rival firms may switch the demand to the firm. This means a smaller degree of substitution which will lead to a less than proportional increase in quantity demanded, contributing to the demand curve for this portion to be price-inelastic. It also implies that there is price rigidity as the firm is unlikely to change price as there is little to gain from price changes unless there is large percentage change in cost condition. This reflects that there is a high degree of mutual interdependence which contributes to the condition of price rigidity.

Draw Diagram and description of diagram

Analysis

**20. What is a collusive oligopoly?**

-Firms in the industry make agreements to set price or output at a certain level to reduce competitiveness and market uncertainty

-Firms in the industry does not make agreements on setting price or output level of the good which usually leads to greater competitiveness and market uncertainty.

**20.1. What is barometric price leader?**

Barometric price leader is a firm, which makes price changes more quickly and successfully than its rivals in response to changing costs and demand conditions. The other firms watch it and emulate its decision.

Barometric price leadership is indicated by a number of market characteristics, for example, occasional switching between firms in the role of price leader. (E.g. Computer chips/Hard disk)

**20.2. What is low-cost price leader?**

Low-cost price leader is a firm with insignificant cost, which provides an advantage over its rivals by setting the price. (E.g. Seagate)

**21. Explain how the firms conduct competition in the imperfect market structure.**

**21.1 What is price competition?**

 It occurs when firms in an industry uses pricing policies to compete for market share.

**21.2 What are the benefits of price competition?**

 It can successfully rule out competitors which lead to greater market shares for the remaining firms. It can definitely increase the quantity of demanded and increase market revenue, given that the price elasticity of demand is greater than one.

**21.3 What are the limitations of price competition?**

 It might take a long time for a competitor to finally give up participating in the price war. And in the meantime, huge losses are made by all the firms engaged in the price war. It is not feasible if the price elasticity of demand is less than one as the total revenue decreases. Furthermore, if the cost of production is rising, it is not viable to decrease the price as average cost per unit is rising.

**21.4 What is predatory pricing?**

Predatory pricing is a deliberate act of reducing price to drive competitors out, therefore reducing competition in the market.

**22 What is non-price price competition?**

It occurs when firms compete using strategies not involving alteration of prices.

**22.1 What are the types of non-price competition?**

Product differentiation

It involves making artificial changes to a product in order to make it seem different or special as compared to the competitor’s goods. One example would be difference in packaging. I

Research and development

Innovative products are developed through research and development which improves the efficiency of production to lower cost of production, enabling the firm to conduct price competition. Besides this, the firm can use the R&D to develop unique product with patents right to compete with the firms.

Branding

Products are branded through product differentiation and advertising to create brand loyalty and this helps the firm to create their loyal customer to increase market share.

Tacit collusion

Firms in the oligopolistic market may conduct tacit collusion to raise their market power by following the market leadership of market price level to reduce market unpredictability so that the firm can derive market power and charge the consumers at a higher price level.

Mergers and Acquisition

In the process of mergers and acquisition, the firm grows in the size and market share, giving it greater market power to set price and output level. Mergers and acquisition is a fast and effective way to det rid of market competition as it takes away the customer of the competitors and reduces the cost of competition from the competitors.

**23. Why will firms in monopolistic competition reap only normal profit in the long run?**

As there are no barriers to entry and the impact of profit condition in short run, thefirm will make only normal profit in the long run. When the firms are making losses in the short run, there will be firms which exit from the industry. This will contribute to the increase in market demand for the remaining firms and the demand curve will become more price inelastic as there is lower degree of substitution until the cost and revenue condition adjust to the normal profit level. On the other hand, when the firms make supernormal profit, there will be the entrance of more firms as they are attracted by the profit level. This will contribute to the fall in the market demand for the firms and the demand curve will become more price-elastic as there is higher degree of substitution until the cost and revenue condition adjust to the normal profit level.

**Qn: Explain and evaluate the effects of a successful advertising campaign on the product equilibrium of the firm in the MC market in the SR and LR**

Other information:

**How does patent right affect production equilibrium?**

Patent rights are a form of barrier to entry. Hence this prevents new firms from entering the market. Demand of the market is then shared between one or few firms, hence output for each firm increases. (production equilibrium increases)

**What are the impacts of patent right on consumers?**

-Patent rights increase firms’ ability to set price and output. Hence it usually translates to high prices for consumers.

-Patent rights are also an incentive for larger firms to do R&D as it ensures that their ideas cannot be duplicated. Hence consumers benefit from higher quality or wider variety of products due to R&D of the firms.

**What are the impacts of patent right on the firm?**

Patent rights are a form of barrier to entry. Hence this prevents new firms from entering the market. The few firms in the industry share the market, resulting in high market power.

**What is intellectual property right?**

A work or invention that is the result of creativity to which one has for a patent, copyright, or trademark

**What is liberalization of market?**

Liberalization of market refers to removal of laws and regulations to create a free market whereby firms have lesser restrictions when it comes to policy implementation and expansion plans. Liberalization of market also brings about greater competition.

**What is mutual inter-dependency?**

It is a situation (usually in oligopolies) whereby firms in the industry are affected by prices and output level of rival firms.

**What is price rigidity?**

Price rigidity is a situation whereby firms follow a decrease in price and not a increase in price (of rival firms). Price rigidity happens as firms are able to match prices with rival firms and result in a kinked demand curve.

**How is welfare loss incurred under imperfect market structures?**

Under imperfect market structures, the presence of market power contributes to the downward-sloping MR and AR. Thus, the production level, based on profit maximization, will not achieve allocative efficiency as the price does not equal to marginal cost. Consequently, there will be welfare loss which is also the value of deadweight loss.

**What is perfect mobility of factors of production?**

Perfect mobility refers to the efficient ability to move factors of production - labor, capital or land - out of one production process into another.

**How does a perfect competitive firm attain production equilibrium? How does the firms in perfect competition set price and output level?**

Allocative and production efficiency can be attained at production equilibrium based on profit maximisation, where MC=MR.

Price and output levels are set by the industry, through market forces of demand and supply and the firm will abide to the price